

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 2 of 16

**Amendments to the Claims**

This listing of claims will replace all prior version and listings of claims in the application:

**Listing of Claims:**

1.-87. (Cancelled).

88. (New) A method of authenticating an account holder by an account authority, comprising the steps of:

as part of setup of an account of the account holder:

(a) recording information pertaining to the account in a database of the account authority, the information not including any third party digital certificates;

(b) assigning a respective unique identifier to the account, such that the recorded information pertaining to the account is retrievable from the database based on its unique identifier;

(c) associating a public key of a public-private key pair of the account holder with the unique identifier such that the public key is retrievable based on the unique identifier, wherein the private key is not stored in the database of the account authority but rather stored securely within a device of the account holder, the device being adapted to generate digital signatures using the private key stored therein; and

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 3 of 16

thereafter:

(d) receiving, by the account authority, an electronic communication containing the unique identifier, a message regarding the account, and a digital signature of the message;

(e) retrieving from the database the associated public key based on the received unique identifier;

(f) authenticating the digital signature using the associated public key to confirm that the digital signature was generated using the private key stored in the device and to confirm the integrity of the message; and

(g) if the digital signature and message successfully authenticate using the associated public key, acting upon the message regarding the account without also requiring any third party digital certificate to authenticate the link between the public key and the account holder

89. (New) The method of claim 88, wherein the account authority is a financial institution.

90. (New) The method of claim 88, wherein the account authority is a financial transaction processor.

91. (New) The method of claim 88, wherein the public key is obtained from the account holder.

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 4 of 16

92. (New) The method of claim 88, wherein the public key is obtained directly from the device of the account holder.

93. (New) The method of claim 88, wherein the public key is obtained from a manufacturer of the device of the account holder.

94. (New) The method of claim 88, wherein the public key is obtained from a distributor of the device.

95. (New) The method of claim 88, wherein the step of associating the public key of the account holder with the unique identifier comprises recording the public key in a record of the account in the database of the account authority.

96. (New) The method of claim 88, wherein the step of associating the public key of the account holder with the unique identifier comprises indexing a record of the account in the database by the public key.

97. (New) The method of claim 88, wherein the information includes an account number.

98. (New) The method of claim 88, wherein the information includes a current balance.

99. (New) The method of claim 88, wherein the information includes an available credit.

100. (New) The method of claim 88, wherein the information includes a list of associated accounts.

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 5 of 16

101. (New) The method of claim 88, wherein the information includes a name of the account holder.
102. (New) The method of claim 88, wherein the information includes an address of the account holder.
103. (New) The method of claim 88, wherein the information includes a social security number of the account holder.
104. (New) The method of claim 88, wherein the information includes a tax identification number of the account holder.
105. (New) The method of claim 88, wherein the information regards the device of the account holder.
106. (New) The method of claim 88, wherein the information includes security features of the device.
107. (New) The method of claim 88, wherein the device comprises a personal computer.
108. (New) The method of claim 88, wherein the device comprises a cell phone.
109. (New) The method of claim 88, wherein the device comprises a PDA.
110. (New) The method of claim 88, wherein the device comprises an electronic key.
111. (New) The method of claim 88, wherein the device comprises a dongle.

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 6 of 16

112. (New) The method of claim 88, wherein the device comprises a subcutaneous device.
113. (New) The method of claim 88, wherein the device comprises a secure chip.
114. (New) The method of claim 88, wherein the device comprises jewelry.
115. (New) The method of claim 88, wherein the device comprises a smart card.
116. (New) The method of claim 88, wherein the device comprises a credit card.
117. (New) The method of claim 88, wherein the device comprises a debit card.
118. (New) The method of claim 88, wherein the device comprises a security card.
119. (New) The method of claim 88, wherein the device comprises an ID badge.
120. (New) The method of claim 88, wherein, prior to generating the digital signature, the device requires the current possessor of the device to input verification data into the device, a comparison of said verification data with data pre-stored within the device resulting in a verification status that is appended to the message that is digitally signed.
121. (New) The method of claim 120, wherein the verification data comprises information known to the account holder.
122. (New) The method of claim 120, wherein the verification data comprises biometric information of the account holder.

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 7 of 16

123. (New) The method of claim 88, wherein, prior to generating the digital signature, the device requires the current possessor of the device to input verification data into the device, and wherein an unsuccessful match between said verification data with data pre-stored within the device prevents the device from generating the digital signature.
124. (New) The method of claim 88, wherein identification of the account holder is verified by the account authority as part of setup of the account and before associating the public key with the account.
125. (New) The method of claim 88, wherein the electronic communication is transmitted by the possessor of the device.
126. (New) The method of claim 88, wherein the electronic communication is transmitted by an intermediate party between the possessor of the device and the account authority.
127. (New) The method of claim 88, wherein the account is a financial, bank, or credit account.
128. (New) The method of claim 127, wherein the message requests a balance of the account.
129. (New) The method of claim 127, wherein the message requests debiting of the account by a specified amount.
130. (New) The method of claim 127, wherein the message requests crediting of the

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 8 of 16

account by a specified amount.

- 131. (New) The method of claim 127, wherein the message requests transferring funds to another account.
- 132. (New) The method of claim 127, wherein the message requests making a monetary payment from the account.
- 133. (New) The method of claim 127, wherein the message requests transferring something of monetary value from the account.
- 134. (New) The method of claim 127, wherein the message requests transferring a security from the account.
- 135. (New) The method of claim 127, wherein the message requests authorizing a charge to the account.
- 136. (New) The method of claim 88, wherein the message requests access to a specified database.
- 137. (New) The method of claim 88, wherein the message requests access to a physical location such as a room, building, parking deck, and web site.
- 138. (New) The method of claim 88, wherein the message requests access to a data transmission such as pay per view, multimedia download, or broadcast.
- 139. (New) The method of claim 88, wherein the message requests purchase of a product or service.

Application No. 09/923,179  
Response and RCE dated December 5, 2005  
Reply to Final Office Action of August 3, 2005  
Page 9 of 16

140. (New) The method of claim 88, wherein the message requests access to a product or a service.
141. (New) The method of claim 88, wherein the message requests transferring information from the account.
142. (New) The method of claim 88, wherein the electronic communication is transmitted over an open and insecure communications medium.
143. (New) The method of claim 142, wherein the communications medium comprises the Internet.
144. (New) The method of claim 142, wherein the electronic communication is not encrypted.
145. (New) The method of claim 142, wherein the electronic communication includes no personal information regarding the account holder.
146. (New) The method of claim 142, wherein the electronic communication includes no account-identifying information other than the unique identifier of the account.